

I. GENERAL

PROJECT DESCRIPTION

THIS PROJECT INVOLVES THE RECONSTRUCTION OF THE EXISTING TRAFFIC CONTROL SIGNAL WITH INTERCONNECT AND PROPOSED STREET LIGHTING AT THE INTERSECTION OF MD 124 (QUINCE ORCHARD RD) AND BANK ST IN MONTGOMERY COUNTY. THE RECONSTRUCTION WILL REPLACE EXISTING SIGNAL POLES, SIGNAL HEADS, SIGNS, PEDESTRIAN SIGNALS, AND CROSSWALKS, INSTALL ADA RAMP ON ALL FOUR CORNERS, AND UPGRADE TO VIDEO DETECTION. MD 124 IS ASSUMED TO RUN IN A NORTH-SOUTH DIRECTION.

II. INTERSECTION OPERATION

- THE INTERSECTION OPERATES IN A NEMA FIVE (5) PHASE, SEMI-ACTUATED MODE. MD 124 NORTHBOUND OPERATES WITH A PROTECTED LEFT TURN PHASE. MD 124 NORTHBOUND AND SOUTHBOUND OPERATE WITH ASSOCIATED PEDESTRIAN PHASES. BANK STREET AND NORTH RD (NIST EXIT) OPERATE WITH ALTERNATE ASSOCIATED PEDESTRIAN PHASES.
- A PROPOSED NEMA FULL-TRAFFIC-ACTUATED, EIGHT (8) PHASE CONTROLLER IN A NEMA SIZE "S" BASE MOUNTED CABINET SHALL BE INSTALLED AT THIS LOCATION. VIDEO DETECTION INTERFACE SHALL BE INSTALLED INTO THE CABINET BY MONTGOMERY COUNTY FORCES.

III. SPECIAL NOTES

APS WILL FUNCTION AS FOLLOWS:
TO CROSS MD 124 (QUINCE ORCHARD RD) FROM WEST SIDE

- WHEN A PEDESTRIAN LOCATES AND PRESSES THE PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT WILL ANNOUNCE THE FOLLOWING MESSAGE: "WAIT TO CROSS QUINCE ORCHARD AT BANK, WAIT."
- WHEN THE WALK PHASE BEGINS, THE PUSHBUTTON UNIT WILL PROVIDE A RAPID TICK WHICH WILL LAST FOR THE DURATION OF THE WALK PHASE.

TO CROSS MD 124 (QUINCE ORCHARD RD) FROM EAST SIDE

- WHEN A PEDESTRIAN LOCATES AND PRESSES THE PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT WILL ANNOUNCE THE FOLLOWING MESSAGE: "WAIT TO CROSS QUINCE ORCHARD AT NORTH, WAIT."
- WHEN THE WALK PHASE BEGINS, THE PUSHBUTTON UNIT WILL PROVIDE A RAPID TICK WHICH WILL LAST FOR THE DURATION OF THE WALK PHASE.

TO CROSS BANK ST

- WHEN A PEDESTRIAN LOCATES AND PRESSES THE PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT WILL ANNOUNCE THE FOLLOWING MESSAGE: "WAIT TO CROSS BANK AT QUINCE ORCHARD WAIT."
- WHEN THE WALK PHASE BEGINS, THE PUSHBUTTON UNIT WILL PROVIDE A RAPID TICK WHICH WILL LAST FOR THE DURATION OF THE WALK PHASE.

TO CROSS NORTH RD

- WHEN A PEDESTRIAN LOCATES AND PRESSES THE PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT WILL ANNOUNCE THE FOLLOWING MESSAGE: "WAIT TO CROSS NORTH AT QUINCE ORCHARD, WAIT."
- WHEN THE WALK PHASE BEGINS, THE PUSHBUTTON UNIT WILL PROVIDE A RAPID TICK WHICH WILL LAST FOR THE DURATION OF THE WALK PHASE.

CONTACTS

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MONTGOMERY COUNTY DOT

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VACANT
SIGNAL SHOP
301-279-1291

EQUIPMENT LIST

A. EQUIPMENT TO BE FURNISHED BY STATE HIGHWAY ADMINISTRATION

ITEM NO.	QUANTITY	DESCRIPTION
900000	97 SF	SHEET ALUMINUM GROUND MOUNTED SIGN 1 EA - D3-2(1) 'BANK ST RIGHT AT SIGNAL' - (VAR.x24") 1 EA - D3-2(1) 'BANK ST LEFT AT SIGNAL' - (VAR.x24") 2 EA - M1-5 'MD 124' - (30"x24") 2 EA - M1-5 'MD 124' - (45"x36") 1 EA - M3-1 'NORTH' - (24"x12") 1 EA - M3-1 'NORTH' - (36"x18") 1 EA - M3-3 'SOUTH' - (36"x18") 1 EA - M3-3 'SOUTH' - (24"x12") 2 EA - M6-1(R) - (21"x15") 2 EA - M6-1(L) - (30"x21") 1 EA - R4-7 - (24"x30") 1 EA - R5-1 - (36"x36") 900000 136 SF 128.5 SHEET ALUMINUM MAST ARM / POLE MOUNTED SIGN 2 EA - D-3(1) 'BANK ST' DUAL FACED - (VAR.x16") 2 EA - D-3(1) 'QUINCE ORCHARD RD' DUAL FACED - (VAR.x16") 1 EA - R3-1 - (36"x36") 1 EA - R3-2 - (36"x36") 2 EA - R3-5(L) - (30"x36") 1 EA - R3-5(R) - (30"x36") 1 EA - R10-3(1) 'PUSH BUTTON TO CROSS BANK ST ->' - (9"x15") 1 EA - R10-3(1) 'PUSH BUTTON TO CROSS BANK ST <-' - (9"x15") 1 EA - R10-3(1) 'PUSH BUTTON TO CROSS NORTH RD <-' - (9"x15") 1 EA - R10-3(1) 'PUSH BUTTON TO CROSS NORTH RD ->' - (9"x15") 2 EA - R10-3(1) 'PUSH BUTTON TO CROSS QUINCE ORCHARD RD ->' - (9"x15") 2 EA - R10-3(1) 'PUSH BUTTON TO CROSS QUINCE ORCHARD RD <-' - (9"x15") 900000 1 EA CONTROLLER CABINET, SIZE "S" W/CTRL, VIDEO INT. 1-8 CAM

EQUIPMENT LIST (CONT'D)

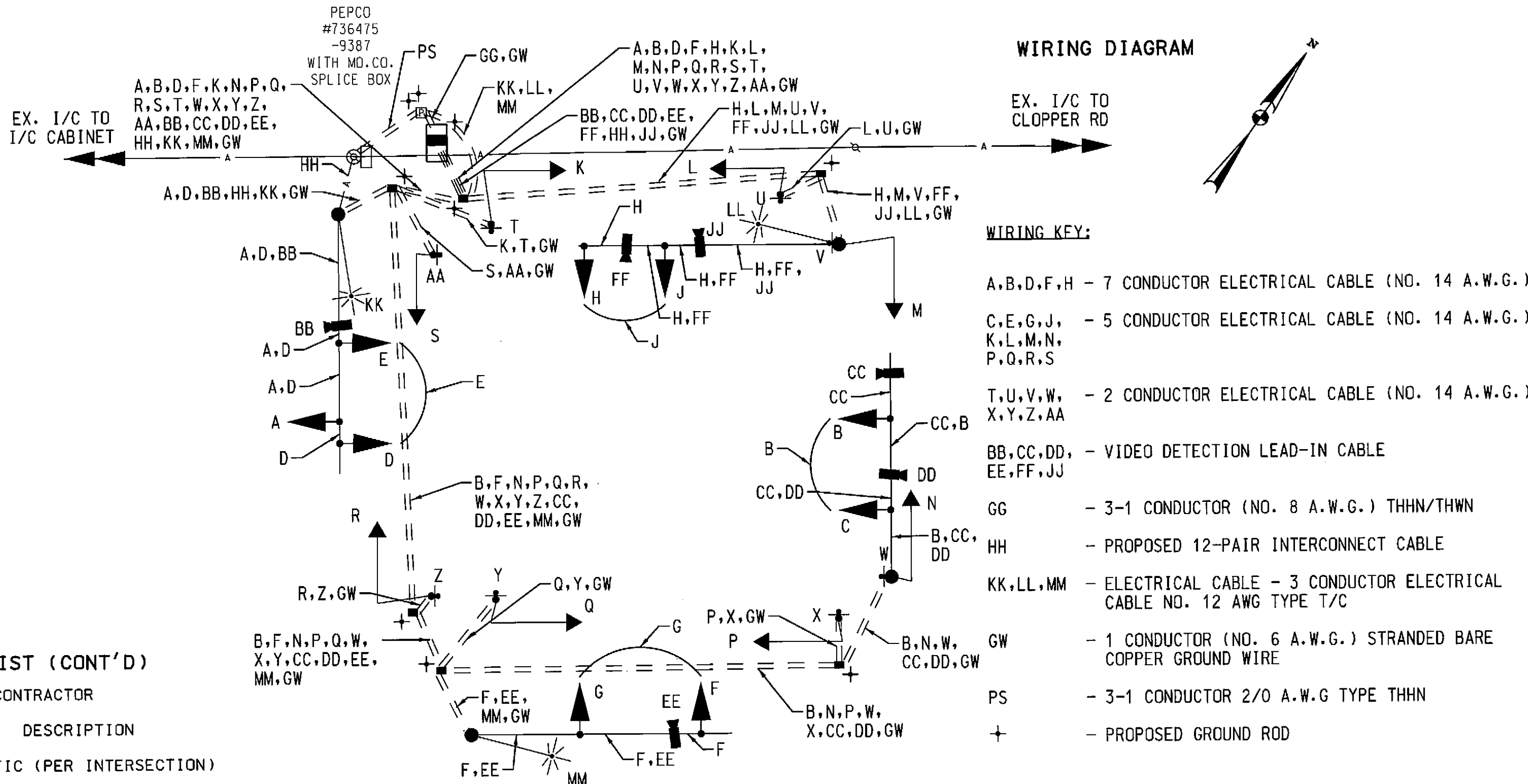
B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY CONTRACTOR

ITEM NO.	QUANTITY	DESCRIPTION
100000	1 EA	MAINTENANCE OF TRAFFIC (PER INTERSECTION)
203030	9 CY	TEST PIT EXCAVATION
585621	610 LF	12 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES
585625	175 LF	24 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES
585700	810 LF	REMOVAL OF EXISTING PAVEMENT MARKING LINES, ANY WIDTH
600000	240 LF	TYPE A COMBINATION CURB AND GUTTER ANY HEIGHT OR DEPTH
600000	170 LF	TYPE A CURB ANY HEIGHT OR DEPTH
655105	1500 SF	5 INCH CONCRETE SIDEWALK
655120	110 SF	DETECTABLE WARNING SURFACE FOR CURB RAMPS
800000	1 EA	2-WIRE APS CENTRAL CONTROL UNIT
800000	3 EA	ANY SIZE LIGHTING ARM ON SIGNAL POLE WITH LED ROADWAY LUMINAIRE
800000	8 EA	AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON STATION AND SIGNS
800000	8 EA	16 INCH LED COUNTDOWN PEDESTRIAN SIGNAL HEAD
800000	6 EA	IP-BASED VIDEO DETECTION CAMERA & ANY LENGTH LEAD-IN CABLE
800000	6 EA	5 FOOT OR 10 FOOT PEDESTAL POLE WITH BREAKAWAY COUPLINGS, FOUNDATION & GROUND ROD
800000	2 EA	MAST ARM POLE & 50' MAST ARM ANY 'T' DIMENSION, FOUNDATION & GROUND ROD
800000	2 EA	MAST ARM POLE & 70' MAST ARM ANY 'T' DIMENSION, FOUNDATION & GROUND ROD
800000	1 EA	100 AMP EMBEDDED METERED SERVICE PEDESTAL, CONCRETE COLLAR & GROUND RODS
800000	1 EA	REMOVE & DISPOSE OF EXISTING SIGNAL EQUIPMENT (PER SIGNALIZED INTERSECTION LOCATION)
800000	1 EA	INSTALL CONTROLLER AND CABINET BASE MOUNT (ANY SIZE) INCLUDING F&I FOUNDATION & GROUND ROD
800000	165 LF	1 - CONDUCTOR ELECTRICAL CABLE, NO. 2/0 AWG, TYPE THHN
800000	100 LF	12-PAIR COMMUNICATION CABLE (SELF-SUPPORTING OR JELLY-FILLED/UNDERGROUND)
800000	525 LF	ELECTRICAL CABLE - 3 CONDUCTOR (NO. 12 AWG) (B.W.G.) TYPE TC
800000	290 LF	UP TO 4 INCH SCHEDULE 80 RIGID PVC CONDUIT - BORED OR SLOTTED
800000	210 LF	UP TO 4 INCH SCHEDULE 80 RIGID PVC CONDUIT-TRENCHED
800000	190 LF	WOOD SIGN SUPPORTS UP TO 4 INCH X 6 INCH
800000 225.5	225.5 SF	INSTALL OVERHEAD OR GROUND MOUNTED SIGN (INCLUDING ALL HARDWARE)
800000	1 EA	THIRD PARTY CONCRETE TESTING (PER INTERSECTION)
802501	500 LF	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
810022	60 LF	ELECTRICAL CABLE 1-CONDUCTOR NO. 8 AWG-THHN/THWN
811001	6 EA	FURNISH AND INSTALL ELECTRICAL HANDHOLE
860284	31 EA	12 INCH LED VEHICULAR TRAFFIC SIGNAL HEAD SECTION
861105	1290 LF	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)
861107	1390 LF	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)
861108	1100 LF	ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 AWG)

C. IF THE CABINET IS TO BE REMOVED SHA FORCES SHALL REMOVE THE CONTROLLER AND ALL AUXILIARY EQUIPMENT FROM THE CONTROLLER CABINET. THE CABINET AND ALL OTHER MATERIALS TO BE REMOVED BY THE CONTRACTOR SHALL BECOME THE PROPERTY OF THE SIGNAL CONTRACTOR UPON COMPLETION OF THE SIGNAL MODIFICATIONS.

PHASE CHART

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
PHASE 2 AND 5	G/G-	G/G-	G	R	R	R	R	R	R	DW	DW	DW	DW	WK	WK	DW	DW
5 CHANGE	G/Y-	G/Y-	G	R	R	R	R	R	R	DW	DW	DW	DW	WK	WK	DW	DW
PHASE 2 AND 6	G	G	G	G	G	R	R	R	R	WK	WK	DW	DW	WK	WK	DW	DW
PED CLEARANCE PHASE	G	G	G	G	G	R	R	R	R	FLDW	FLDW	DW	DW	FLDW	FLDW	DW	DW
2 AND 6 CHANGE	Y	Y	Y	Y	Y	R	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 4 AND 8	R	R	R	R	R	G	G	G	G	DW	DW	DW	DW	DW	DW	DW	DW
4 AND 8 CHANGE	R	R	R	R	R	Y	Y	Y	Y	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 4 ALT AND 8 ALT	R	R	R	R	R	G	G	G	G	DW	DW	WK	WK	DW	DW	WK	WK
PED CLEARANCE PHASE	R	R	R	R	R	G	G	G	G	DW	DW	FLDW	FLDW	DW	DW	FLDW	FLDW
4 ALT AND 8 ALT CHANGE	R	R	R	R	R	Y	Y	Y	Y	DW	DW	DW	DW	DW	DW	DW	DW
FLASHING OPERATION	FLY	FLY	FLY	FLY	FLY	FLR	FLR	FLR	FLR	DARK	DARK	DARK	DARK	DARK	DARK	DARK	DARK



STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION

MD 124 (QUINCE ORCHARD RD) AT BANK ST

GAITHERSBURG, MD

GENERAL INFORMATION SHEET

SCALE N.T.S. DATE AUGUST 9, 2013 CONTRACT NO. XY2385185

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TS NO. 1656B-GI DRAWING SG-03 OF 03 SHEET NO. 03 OF 03

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